



Sounds from Old CFLs

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TOOLS:

- [Screwdriver \(1\)](#)
- [Soldering iron \(1\)](#)

PARTS:

- [CFL bulb \(1\)](#)
old
- [Resistor \(1\)](#)
- [Potentiometer \(1\)](#)
- [Perf board \(1\)](#)
- [Hook-up wire \(1\)](#)
- [Audio jacks \(1\)](#)
- [Step switch \(1\)](#)
- [Case \(1\)](#)
any small strong box
- [Velcro tape \(1\)](#)

SUMMARY

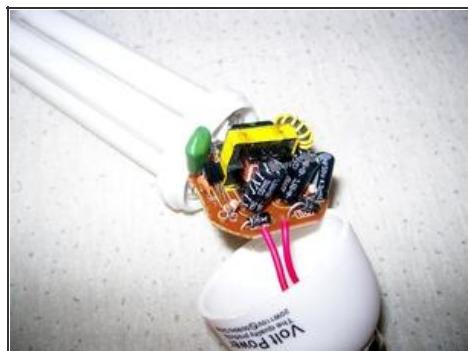
When compact fluorescent lamps (CFLs) burn out, don't throw them out! Here's a project to remove the electronics from CFLs and reuse them to make fun guitar effects.

Step 1 — Sounds from Old CFLs



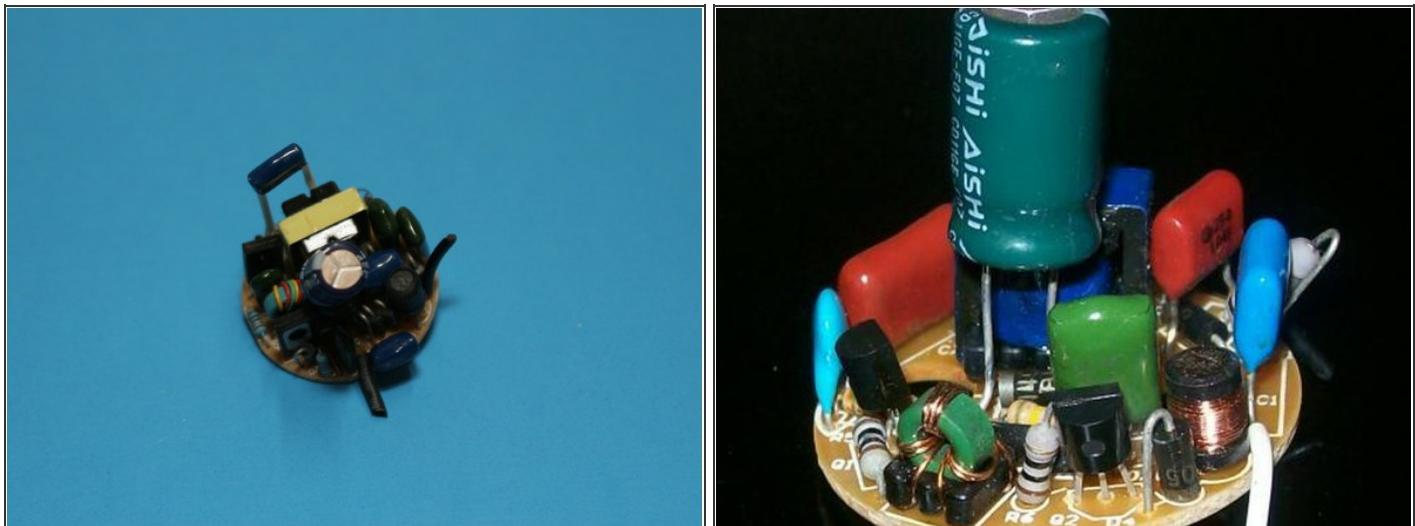
- Carefully pry apart the base with a flathead screwdriver, and you'll find a tiny circuit board stuffed with useful components. Then you can recycle just the bulb (be careful not to break it). Removing the bulb is the first thing they do at the recycler's anyway.

Step 2



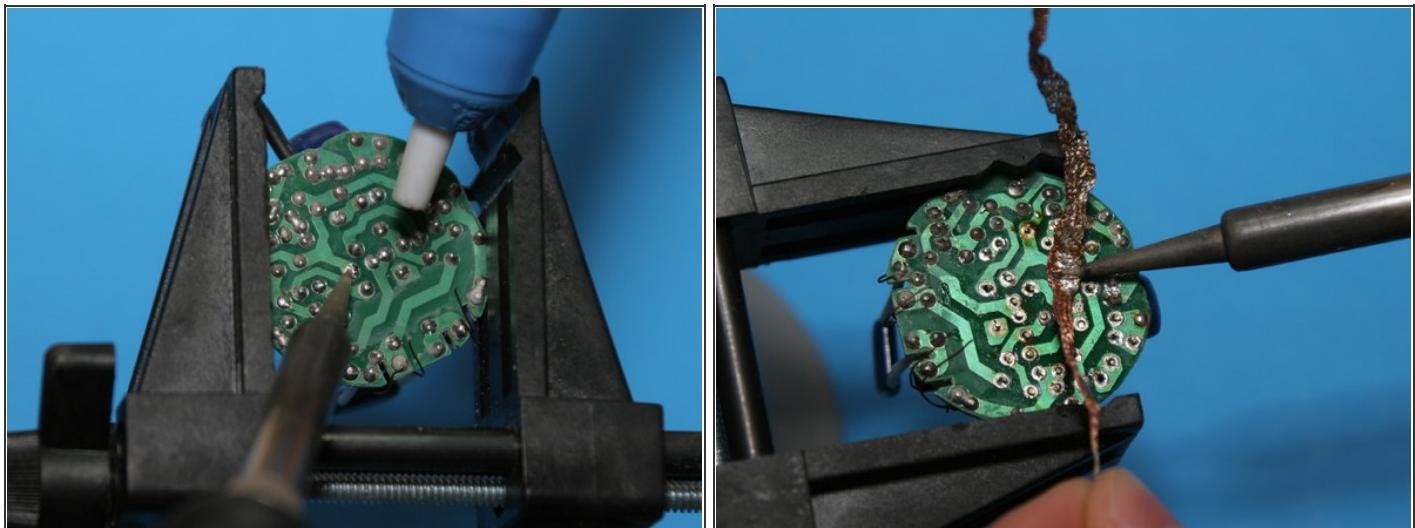
- I've opened up a few different brands, and the contents are all pretty much the same. A typical inventory includes 2 transistors, four 1N4005 diodes, assorted ceramic capacitors and resistors, a $10\mu F$ electrolytic capacitor, and a small coil transformer.
- I don't bother salvaging the resistors, but I like to use the film caps, transistors, and diodes to make guitar effects boxes. Fuzzes, boosts, and buffers — oh my!

Step 3



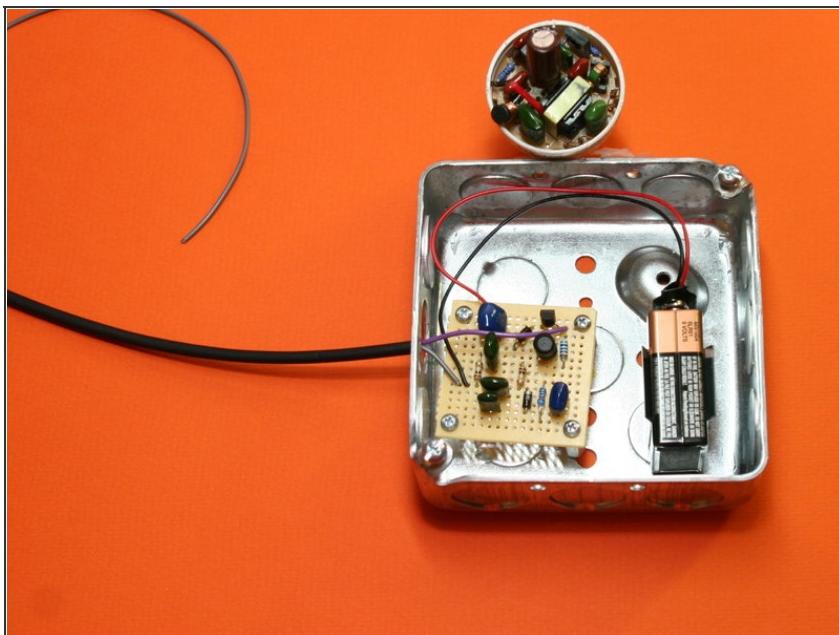
- Here are some CFL-based effects that I've concocted and had fun with. Review the [Burnout Sound schematics](#) along with links to other CFL component projects and DIY guitar effects resources.
- *Fluorescent Fuzz and Shining Sixties Fuzz* - These impart a 60s or 70s rock/psychedelic sound.
- *13 Watt Overdrive* - This adds some 70s rock “crunch” to your tone.
- *Light Ranger* - This treble booster is great for making your guitar solos stand out and cut through the mix.
- *Bulb Booster* - This makes your signal louder, pushes your amp harder, and generally makes everything sound better.

Step 4



- For any of these effects, you assemble the circuits by soldering them on a small piece of perf board, and use leads to connect the board out to the battery snap and input/output jacks. The [online schematic diagrams](#) show how everything connects.

Step 5



- To secure the circuit board inside the box, I use velcro tape.

Step 6



- By using a stereo jack for input, you can either activate the effect circuit or bypass it, depending on whether the 3PDT step switch connects to the jack's right or left channel contact.
- To provide a volume control, you connect the potentiometer between the circuit's output and the output jack on the box, with the third contact going to ground.

This project originally appeared in [MAKE Magazine Volume 19](#).

Related posts on Make: Projects:

Turning Dead CFLs into LEDs

<http://blog.makezine.com/archive/2009/04...>

Ham Radio Transmitter from a CFL bulb

<http://blog.makezine.com/archive/2008/12...>

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